

June 12, 1952

Dr. Robert Guthrie  
Sloan-Kettering Institute for Cancer Research  
410 E. 68 Street  
New York 21, N.Y.

Dear Bob:

I am pretty sure that I have tested W-1177 x AT66 9723. Some years ago, I tried crossing various auxotrophs in this strain, and with K-12 derivatives, unsuccessfully. I wouldn't say that it had been completely, exhaustively worked out, but nothing encouraging has come up. You might check with Ryan, who has been using this strain for some time. B has been looked at rather thoroughly, and has shown no signs whatever of mating in any system. Lately, I've revised my conclusions about 9637 (the "Waksman" strains used especially by Bernie Davis). This appears to be fertile after all, but at an extremely low rate (ca  $10^{-10}$ ) in the various combinations tested. The fertility is too low to be useful for genetic work. I'm afraid we don't have the kinds of mutants you are looking for in K-12, with perhaps one or two exceptions. Why don't you go after them yourself? I think Bernie must have a slant of K-12- if not, I'll be glad to send you one. If you want to do recombination work, you should best start out with marked auxotroph strains so that you don't have to rely on the mutation you're interested in as a selected marker. 58-161 or W-1177 would do the trick. Again, I think you can get them across the street.

As to *B. subtilis*, we've made some desultory efforts with it but have not gotten very far towards a conclusive test. If you have the material for it, it certainly ought to be done. DeLamater has been talking about sex in *B. megaterium*, but the evidence (as it is) is purely cytological.

Sincerely,

Joshua Lederberg